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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,798	01/25/2006	Buddie Gordon Miller	052895	9646

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EXAMINER

VENNE, DANIEL V

ART UNIT	PAPER NUMBER
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3617

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,798	Applicant(s) MILLER, BUDDIE GORDON	
	Examiner DANIEL V. VENNE	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/31/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A preliminary amendment was received from applicant on 1/25/2006.
2. Claim 1 is canceled.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the transverse slot extending through the catamaran hull of claim 17 in sufficient detail as described in the specification and recited in claim 17; although Fig. 17 shows a side view of the transverse slot opening, there is no plan view drawing to show the transverse slot extending through each hull of the catamaran to fully depict the vertical slot configuration claimed. Similarly, the claim limitations recited by claim 18 are not shown in the drawings. Also, Figs. 3-5 and 10-13 do not show how there are multiple centers of buoyancy created, since the center of buoyancy is the center or centroid of the underwater volume and the one submerged hull shown only displaces one underwater volume, unlike Figs. 1 and 2. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). The drawings are also objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claim limitations in claims 17 (see above), claim 18 reciting the "boat hull is a trimaran" and "each hull of the trimaran has a transverse slot extending therethrough" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 4-8, 10, 13, 17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 17 recites the limitation "each side hull" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim. Although a catamaran has two hulls, applicant has not explicitly claimed multiple or two hulls.

8. Claim 18 recites the limitation "each hull" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim. Although a trimaran has three hulls, applicant has not explicitly claimed multiple or three hulls.

9. Claims 4-8, 10 and 13 are considered indefinite in as much as applicant has not explicitly defined a front, rear, top and bottom of the slot for the examiner to clearly establish how the slot is open or closed.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 2-16, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Klose (US 3291088). Klose discloses a boat with a hull [50] having at least one elongated vertical slot (trunk) [64] along the boat centerline and extending substantially through the hull. Water can freely communicate with the slot when the removable daggerboard [76] is not fitted in place within the slot. The slot extends longitudinally through the boat hull, although not through the entire hull length. The slot is open at a top and bottom and can be considered open at a bottom forward end and bottom rear end and can be considered closed at a front vertical portion and at a bottom vertical portion. The opening at the hull bottom and deck can be considered an air vent. The slot can be considered intermittently open as much as the water level can intermittently change to affect the air and water volume and opening in the slot. Applicant has not

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specified a degree of openness or closure for the slot nor clearly defined a front, rear, bottom or top of the slot, such that the slot can be clearly distinguished over Klose. The slot can be considered angled as much as any object can be considered angled (sloped, inclined or slanted) by any angle equal to or between 0 and 360 degrees. In as much as the center buoyancy is the centroid of the underwater portion of a vessel or center of the underwater volume (Principles of Naval Architecture, Vol. I Stability and Strength, pp. 16-17, (c) 1988 SNAME), only one center of buoyancy is provided for any single immersed object; unless a slot completely separates a submerged object into more than one separate objects, only one center of buoyancy can exist for the object. However, if one considers that the center of buoyancy is the sum of all centers of buoyancy for each portion of a submerged hull, then it can be considered that Klose would inherently have a center of buoyancy for each symmetric port and starboard half of the hull on each side of the slot with a net center of buoyancy (or net centroid of underwater volume) being between the individual fractional centers of buoyancy for the two symmetric port and starboard halves. In as much as Webster's II Dictionary Third Edition (c) 2005 defines as one definition for ***submarine*** – *being undersea or beneath the surface of the sea or undersea*, the hull portion of Klose beneath the surface of the water can be considered a submarine hull. Applicant has not explicitly defined submarine hull in the specification as a hull of a ship or a vehicle that operates solely submerged or beneath the surface of the sea; applicant indicates in paragraph [0022] of the Disclosure of the Invention (US 2008/0053355 A1) and that a submarine vessel can include a vessel which can operate either fully or partially submerged.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klose (US 3291088). Klose discloses all claimed features as indicated above with the exception of a plurality of elongated slots or including three slots, configured as claimed. It would have been obvious to one of ordinary skill in the art to include more than one slot and up to three slots of the recited configuration with Klose to create the invention as claimed by applicant, in order to provide for multiple removable daggerboards to improve upon the lateral and dynamic stability of the boat.

Conclusion

14. The prior cited and not relied upon is considered pertinent to applicant's disclosure. Solari (US 4993349) discloses two longitudinal slots (channels) [11, 12] on each side of a central slot (channel) [13]. Solari also discloses two slots (ducts) [40, 41].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel V. Venne whose telephone number is (571) 272-7947. The examiner can normally be reached between 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

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Samuel J. Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (In USA or CANADA) or 571-272-1000.

DVV

/Jesús D. Sotelo/
Primary Examiner, Art Unit 3617